



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,869	03/22/2004	Joseph Gerard Birmingham	MET 005	1786

23408 7590 07/18/2006

GARY C. COHN, PLLC  
1147 NORTH FOURTH STREET  
UNIT 6E  
PHILADELPHIA, PA 19123

EXAMINER

TAI, CYRIL

ART UNIT PAPER NUMBER

1723

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/805,869	BIRMINGHAM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cyril Tai	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) 8 and 9 is/are objected to.
- 8) ☒ Claim(s) 10 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/14/04, 9/2/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-9, drawn to a microimpactor system, classified in class 210, subclass 322.
  - II. Claim 10, drawn to a method of forming an array of microimpactor surfaces, classified in class 29, subclass 896.62.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product made and process of making. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, an array of microimpactor surfaces can be formed outside of a fluid conduit and then be placed within a fluid conduit, in order to make a microimpactor system.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Gary Cohn on 6/29/2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action.

Claim 10 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Call et al (US 6,120,573).

Regarding claim 1, Call et al disclose a microimpactor system comprising a fluid conduit having a plurality of spaced-apart rows of microimpactors (12) arranged in the fluid conduit substantially transverse to a main direction of flow of fluid (16) through the fluid conduit, wherein each of said rows of microimpactors (12) is formed by a microimpactor sheet (10) having a plurality of openings that define in each such sheet at least one line of two or more microimpactors (Fig. 1A).

Regarding claim 2, Call et al disclose microimpactors in at least two successive rows (13a, 13b, 13c) are offset from each other (col. 5, lines 4-10).

Regarding claim 4, Call et al disclose the fluid conduit includes a fluid inlet (42) and a fluid outlet (46) (Fig. 3B).

Regarding claim 5, Call et al disclose a means for moving fluid through the system (58).

Regarding claim 6, Call et al disclose a means for applying an electrical charge to at least one microimpactor sheet (col. 13, line 47 – col. 14, line 10).

Regarding claim 7, Call et al disclose a means, upstream from said microimpactor sheets for applying an electrical charge to particles borne in a fluid transported through the fluid conduit (col. 13, line 47 – col. 14, line 10).

8. Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Birmingham et al (US 6,010,554).

Regarding claim 1, Birmingham et al disclose a microimpactor system comprising a fluid conduit having a plurality of spaced-apart rows of microimpactors (12) arranged in the fluid conduit substantially transverse to a main direction of flow of fluid through the fluid conduit, wherein each of said rows of microimpactors is formed by a microimpactor sheet (13) having a plurality of openings that define in each such sheet at least one line of two or more microimpactors (Fig. 1).

Regarding claim 3, Birmingham et al disclose microimpactors in successive rows are spaced apart at a distance defined by one or more spacer sheets (13) interposed between the successive rows of microimpactors (Fig. 2).

***Allowable Subject Matter***

9. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cyril Tai whose telephone number is (571) 272-1495. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

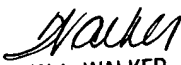
Cyril Tai  
Examiner  
Art Unit 1723

Application/Control Number: 10/805,869

Page 6

Art Unit: 1723

CT  
7/5/2006

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700